

ON THE GENUS YUSHENGLIUA (HYMENOPTERA, TENTHREDINIDAE) WITH DESCRIPTION OF A NEW SPECIES FROM CHINA

WEI Mei Cai, NIU Geng Yun

Lab of Insect Systematics and Evolutionary Biology, Central South University of Forestry and Technology, Changsha 410004, China; E-mail: weimc@126.com

Abstract The diagnosis of the genus *Yushengliua* Wei & Nie, 1999, as well as the difference between *Yushengliua* and *Taxonemphytus* Malaise, 1947, *Linomorpha* Malaise, 1947 and *Stenomphytus* Wei & Nie, 1999, are briefly discussed. *Y. formosa* sp. nov., is described from Sichuan, China. A key to the known species of *Yushengliua* is proposed. Type specimens of the new species are deposited in the Insect Collection of Central South University of Forestry and Technology, Changsha, China.

Key words Hymenoptera, Tenthredinidae, *Yushengliua*, new species, China.

Yushengliua is erected on the basis of *Yushengliua microaula* Wei & Nie, collected from Yunnan Province, China (Wei & Nie, 1999). It is a small sawfly genus with only 1 known species recorded from China till 2006 (Wei *et al.*, 2006). A new species, *Y. formosa* sp. nov., found from Sichuan Province, China is described here. Both species were collected from the subtropical evergreen broadleaf forests region of Southwest China.

Yushengliua Wei & Nie

Yushengliua Wei & Nie, 1999b: 10–11.

Type species: *Yushengliua microaula* Wei & Nie, 1999b.

Diagnosis. Body slender, strongly shining; mandibles asymmetrical, left mandible with a large basal tooth and a slender outer tooth, without subapical shoulder, right mandible simple; malar space longer than diameter of an ocellus; clypeus strongly elevated, acutely edged, with a distinct transversal carina, anterior excision round, with depth about two fifths total length of clypeus, lateral lobe short and narrow; labrum small, about as long as middle length of clypeus; base of labrum covered by clypeus; supraclypeal area evenly elevated, with an obtuse middle carina; occipital carina complete, posterior margin of postocellar area without carina; eyes small, shortest distance between them 1.5–2.0 times height of an eye; head behind eyes in dorsal view long and dilated behind eyes; postocellar area wider than long. Antenna long, slightly compressed, 3 times head width, pedicellum slightly shorter than width, third antennomere slightly shorter than fourth one. Anterior lobe of pronotum 3 times diameter of an ocellus, with a distinct fine submarginal carina; propleura broadly meeting ventrally, prosternum short and broad, about as long as broad; mesepisternum with a sharp anterior carina, metapostnotum long and flat, with an obtuse middle carina. Inner tibial spur of front leg bifurcate;

hind tibia slightly shorter than hind tarsus, 1.3 times as long as hind femur and trochanters together, inner apical spur of hind tibia slightly longer than outer spur and apical width of hind tibia, not enlarged or broadened; hind basitarsus as long as following 3 tarsomeres together; claw with a distinct basal lobe, inner tooth slightly longer than or as long as outer tooth. Fore wing with cells 1R1 and 1Rs merged, cell 2Rs longer than half length of cells 1R1+ 1Rs; R+ M distinct but very short; cu-a joining cell 1M at basal 1/5, anal cross vein weakly oblique, joining 1A at an angle of 60–80°. Hind wing without closed middle cell, cell R1 with a small appendiculate cell, anal cell sessile. Ovipositor longer than metabasitarsus; annular patch semitransparent, pilose band indistinct, serrulae oblique, feebly protruding, with minute subbasal teeth.

Notes. *Yushengliua* is a member of the tribe Allantini, Allantinae. It stands between the subtribes Linomorphina and Allantina (Wei & Nie, 1998). The structure of mouthparts and clypeus of *Yushengliua* is similar to members of Allantina, the structure of wing venation and legs are similar to members of Linomorphina. *Yushengliua* differs from other genera of the two subtribes in the eyes quite small and the malar space long.

Yushengliua is quite similar to *Taxonemphytus* Malaise, 1947 in general appearance. It differs from *Taxonemphytus* in eyes quite small with the shortest distance between eyes 1.5–2.0 times the height of an eye, prosternum as long as wide, hind anal cell sessile, hind basitarsus much shorter than following 4 tarsomeres together, pedicellum broader than long, postocellar area broader than long, labrum smaller, basal part covered by clypeus, clypeus semicircularly incised to half the length of clypeus, as well as body and legs quite slender.

Yushengliua is also somewhat similar to *Linomorpha* Malaise, 1947 and *Stenomphytus* Wei & Nie, 1999 (Wei

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et Nie, 1999a). *Yushengliua* differs from *Linomorpha* in the clypeus strongly elevated with a distinct marginal carina; eyes small, the shortest distance between eyes 1.5-2.0 times the height of an eye; malar space longer than diameter of an ocellus; antenna about 3 times head width, pedicellum broader than long; prosternum as long as wide; hind basitarsus much shorter than following 4 tarsomeres together, claw long and not sharply bent; cell 2Rs much more than half length of 1R1+1Rs; ovipositor large, distinctly longer than hind basitarsus, serrulae of lancet long, with more than 10 minute subbasal teeth. *Yushengliua* differs from *Stenamphytus* in the clypeus strongly elevated with a distinct marginal carina; eyes small, the shortest distance between eyes 1.5-2.0 times the height of an eye; antenna about 3 times head width, pedicellum broader than long; prosternum as long as wide; hind basitarsus much shorter than following 4 tarsomeres together; cell 2Rs much more than half length of 1R1+1Rs, and hind anal cell sessile.

Yushengliua formosa **sp. nov.** (Figs 1-6)

Female. Body length 12.5 mm; head pale brown, mouthparts, clypeus and inner orbits yellow, a narrow ring around each ocellus black, apex of mandible black brown; scape pale brown, 2nd to 5th antennomeres brown, 6th to 9th antennomeres yellow; thorax brown, basin of pronotum, anterior corner of propleuron, middle line of prescutum, parapsis largely, metanotum entirely, anterior margin of mesepisternum, a broad stripe on mesepimeron, metepimeron largely, black; posterior corner of pronotum, tegula, lateral margins of prescutum, mesoscutellum and posttergite, metascutellum, a large patch on mesepisternum, posterior margin of mesepimeron and of metepimeron shining yellow; abdomen pale yellow brown, anterior corner of 1st tergite with a distinct black spot, other part of 1st tergite, 2nd tergite entirely and lateral sides of 3rd tergite shining yellow, 3rd tergite with a pair of large, quadrate black spots, 4th to 10th tergites orange brown dorsally, 4th and 5th tergites each with a narrow and small black stripe laterally. Legs pale brown, all coxae and trochanters, hind tarsus largely yellowish, hind femur black entirely. Wings yellowish hyaline, apex slightly infusate, vein C of four wings almost entirely, anterior side of vein Sc+R, basal half of stigma and vein A entirely pale brown, other veins and apical half of stigma black or black brown. Body hairs golden. (Fig. 1)

Clypeus densely, frons minutely and posterior half of mesoscutellum shallowly and sparsely punctured, basin of pronotum feebly shagreen, abdominal tergites 3-9 covered with small hair-warts, body otherwise without puncture or microsculpture, strongly shining. Head

behind eyes feebly dilated and hardly longer than eye in dorsal view, postocellar area weakly elevated, wider than long as 5:4; lateral furrows distinct but shallow, curved at anterior third; eyes small, shortest distance between eyes about 1.5 times height of eye, malar space 1.3 times as long as diameter of lateral ocellus; clypeus strongly elevated and roundly emarginated; frons elevated, lateral wall distinct, anterior wall absent. Mesoscutellum slightly elevated. Hind basitarsus as long as following three joints together; teeth of claw parallel, inner tooth as long as and slightly broader than outer tooth (Fig. 2). Front wing with cell 1R1+1Rs about 1.3 times length of cell 2Rs, vein 2r-m strongly oblique, cur a joining cell 1M at basal fifth. Ovipositor in lateral view as in Fig. 3, sheath in dorsal view very long and narrow, lateral setae distinctly curved; lancet with 27 serrulae (Fig. 4), middle serrula each with inner subbasal teeth obscure and about 12 outer subbasal teeth (Figs. 5-6).

Male. Unknown.

Distribution. China (Sichuan).

Etymology. The specific epithet, *formosa* meaning beautiful, refers to the body colour of the species.

Holotype ♀, Guoxianqiao (29°40' N, 102°56' E, alt. 1750 m), Mt. Wawu, Sichuan, China, 11 Aug. 2007, leg. LIU Fei. Paratypes 2♀♀, data same as the holotype.

Remarks. See the following key to species of *Yushengliua* Wei *et* Nie, 1999 for the differences between the new species and *Y. microcula* Wei *et* Nie, 1999.

Yushengliua microcula **Wei *et* Nie, 1999** (Figs. 7-9)

Yushengliua microcula Wei *et* Nie, 1999b: 11.

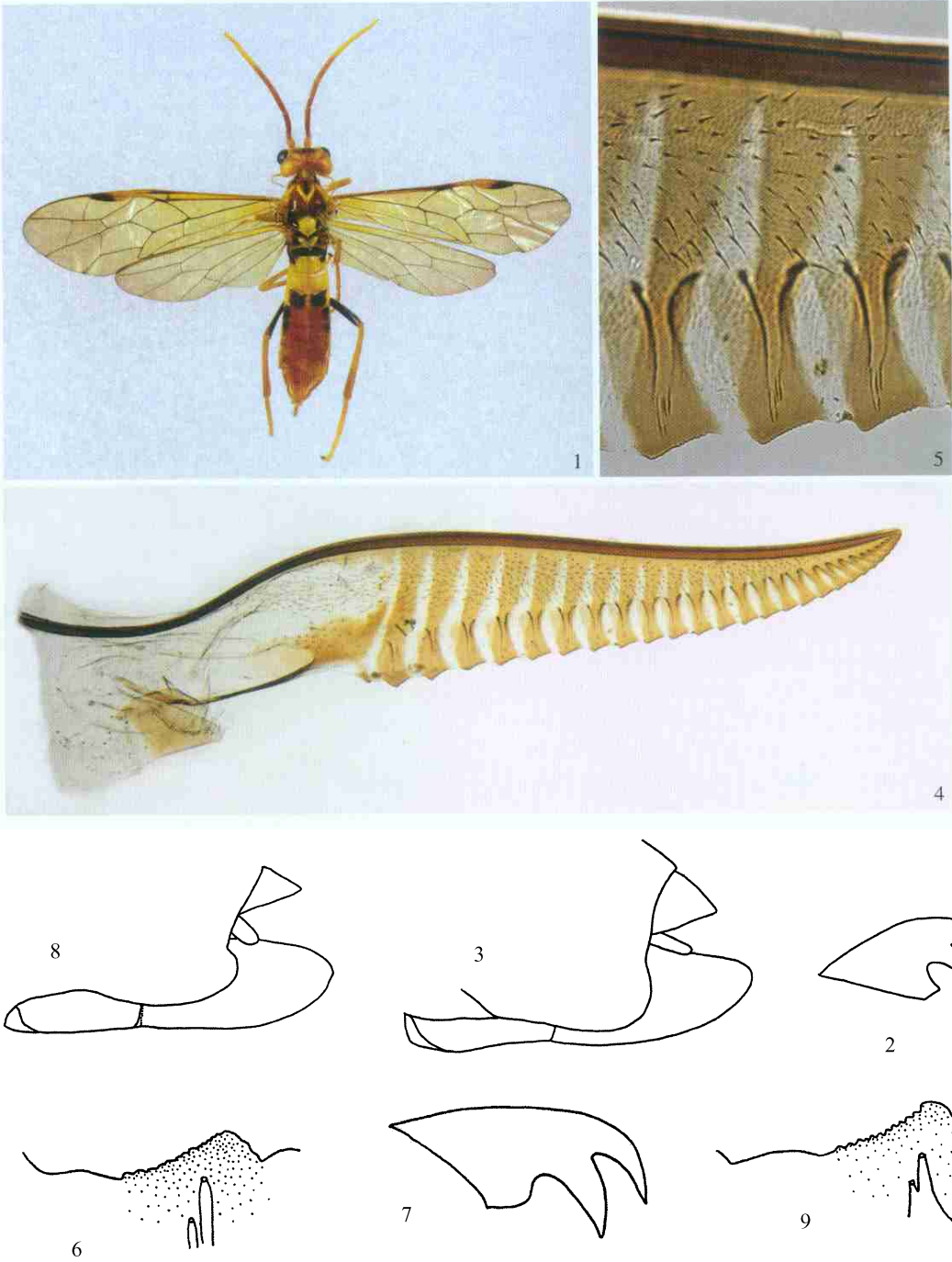
Distribution. China (Yunnan).

Specimen examined. 1♀, holotype, Deqin, Yunnan, China, 3700 m, 26 Aug. 1987.

Key to species of *Yushengliua* Wei *et* Nie, 1999

1 Antenna shorter than abdomen, basal four antennomeres black; shortest distance between eyes 2 times height of an eye; posterior orbit distinctly broader than eye in lateral view; malar space 2 times diameter of an ocellus; thorax black with a few yellow spots; tergites 3-7 of abdomen each with a pair of lateral spots which is similar in shape, remote to each other, tergite 8 with 4 black spots, tergite 9 with a pair of large lateral spots; hind coxae black; pterostigma black at apical 2/3 and pale brown at basal 1/3; claw with inner tooth distinctly longer than outer tooth; lancet with 21 serrulae. (Yunnan, China) *Y. microcula* **Wei *et* Nie, 1999**

Antenna longer than abdomen, basal four antennomeres brown; shortest distance between eyes 1.5 times height of an eye; posterior orbit hardly broader than eye in lateral view; malar space 1.3 times diameter of an ocellus; thorax yellow and brown with a few black spots; tergite 3 of abdomen with a pair of large, quadrate black spots, close to each other, tergites 4-6 each with a pair of very small lateral black dots, tergites 7-10 without black spot; all coxae entirely shining yellow; pterostigma pale brown at basal half and black at apical half; claw with inner tooth as long as or shorter than outer tooth; lancet with 27 serrulae. (Sichuan, China) *Y. formosa* **sp. nov.**



Figs 1-9. *Yushengflua* spp. 1-6. *Y. formosa* sp. nov. 7-9. *Y. microcula* Wei & Nie, 1999. 1. Adult female. 2, 7. Claw. 3, 8. Ovipositor, lateral view. 4. Lancet. 5. Middle annuli. 6, 9. The 10th serrula.

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魏美才 牛耕耘

中南林业科技大学昆虫系统和进化生物学实验室 长沙 410004, E-mail: weimc@126.com

摘 要 详细讨论了叶蜂科平背叶蜂亚科美叶蜂属 *Yushagluia* Wei & Nie, 1999 的属征, 美叶蜂属与其近缘属间叶蜂属 *Taxanophytus* Malaise, 1947 以及形态上比较相似的丽叶蜂属 *Linanorpha* Malaise, 1947、雅叶蜂属 *Stenophytus* Wei &

Nie, 1999 之间的鉴别特征。记述了中国美叶蜂属 1 新种: *Y. formosa* sp. nov.。新种模式标本保存于中南林业科技大学昆虫模式标本室。

关键词 膜翅目, 叶蜂科, 美叶蜂属, 新种, 中国.

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